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CALIFORNIA **URBAN WATER** AGENCIES

JUL 16 1999

July 14, 1999

Mr. Lester Snow
CALFED
1416 9th Street
Sacramento, CA

Economic Evaluation of Water Management Alternatives

Dear Mr. Snow, Lester

The California Urban Water Agencies (CUWA) has followed, with great interest, the development of the CalFed Bay-Delta Program study Economic Evaluation of Water Management Alternatives, Screening Analysis and Scenario Development (EEWMA). CUWA recognizes that the EEWMA study has the potential to serve as part of Clean Water Act (CWA) Section 404 requirements for any possible facility development under the Bay-Delta Program. The purpose of this letter is to provide CUWA's comments on the June 1999 draft of this study and suggest future steps that need to be taken to more fully complete this analysis.

CUWA is highly supportive of the analysis conducted in the June 1999 draft EEWMA study. The study objectives are commendable and the methodology has proven to be enlightening. The efforts to date have identified many water management alternatives and has done an admirable job in attempting to represent and analyze them on an unbiased technical level. However, there are several areas where CUWA believes that the June 1999 draft could be improved. For clarity, I will break our comments into three sections: Base Assumptions, Analytical Methodology, and Study Conclusions.

1) **Base Assumptions:**

The EEWMA study is based on demand projections and supply availability taken from DWR Bulletin 160-98. To some extent the EEWMA study team has accommodated the changes that CUWA members have requested, but the following mischaracterized information remains in the report.

- CUWA members, including those represented under the "Urban Delta Exporters", are fully committed to implementing all cost effective conservation whenever it is clearly and accurately identified. However on page 1-5, and elsewhere in the EEWMA study, the report states that urban water use efficiency beyond BMPs was "specifically excluded" by the Urban Delta Exporters This statement is not true, and arises from a miscommunication between CALFED and Urban Delta

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Exporters' staff.. The restriction we placed on conservation to be included in the analysis was not meant to rule out cost-effective conservation. Rather, the number we provided was our best estimate of the total level of cost-effective conservation. We believe that the additional levels specified in Bulletin 160-98 are too speculative to be included at this time. If additional cost-effective conservation potential is identified through more thorough study, then CUWA will support its inclusion in this study and in future studies.

- The assumed drought yield of the State Water Project (SWP), based on DWRSIM Run 675 SWP/CVP (page 4-7), is overly optimistic. Based on current DWRSIM runs, drought years such as a recurrence of 1934, 1977, or 1991 hydrologies would produce far less supply from the SWP than the EEWMA report suggests. This alone suggests that the EEWMA report cannot be used to exclude any Bay-Delta Program options, and strongly points to the need for a multi-year, multi-hydrology approach to help evaluate California's water reliability. We understand that CALFED has already commenced this effort, and we look forward to working with the staff to refine that analysis..

- The data used for recycling, groundwater conjunctive use, water transfers, as well as conservation is thin and requires additional study. Much of what could be concluded by the report rests on the estimates of costs for highly speculative water resources that have not been tested for technical and institutional feasibility. An important next step is to refine the cost and yield data, particularly for those resources identified as being in the $800 to $1000 per AF category. It appears that the key policy choice will be to select among these resources. The current information is an inadequate basis for these policy choices.

2) **Analytical Methodology:**

The EEWMA study's analytical methodology is a welcome addition to the Bay-Delta discussion. The use of economic factors that impact supply and demand represents an advancement over past uses of static demand and supply analysis. With respect to the analytical methodology, there are three comments to be made.

- The EEWMA study fails to hold to an impartial position with respect to the Isolated Facility. It is unfortunate that the Unconstrained and No Subsidy perspective restricts the inclusion of the Isolated Facility and only considers it in a subsequent sensitivity analysis. The results of the analysis make clear that the true unconstrained case includes the Isolated Facility, and the CALFED report resorts to unseemly contortions to avoid recognizing this. The fact that the Urban Delta Exporters' preference set shows overall lower total costs clearly highlights this lack of impartiality. This should be an impossibility—in theory, the

unconstrained analysis should always provide the best economic outcome. We urge you to reconsider the restriction on an Isolated Facility under the Unconstrained and No Subsidy case so that CALFED is spared the embarrassment of this transparent evasion.

- As mentioned above, CUWA believes that the EEWMA needs to be analyzed using a multi-year multi-hydrology modeling approach. In the comments on the report assumptions, we have cited that the SWP assumptions need to be tested for all hydrologies, not just the fifth percentile as currently represented in the report. In addition, a multi-hydrology model will help test the assumptions of storage refill and transfer yield assumed in the study. This point carries more than a technical imperative because of the recent situation of Delta Smelt take that affected pumping.

- Water quality is only marginally analyzed in this study. Although CALFED made a significant attempt at including water quality impacts in the EEWMA, more detailed analysis needs to be done. As we have stated before, CUWA members are seeking reliability and improved water quality from the Bay-Delta solution. We suggest that, either in the preparation of the final draft, or in the scope of work for the Integrated Economic and Hydrologic Evaluation, a comprehensive review of water quality of all supply sources be conducted to determine appropriate treatment protocols and their associated costs. This would include the additional water source mixing costs for water users who are able to "blend" supplies in such way as to mitigate the impacts of biological, disinfection by-product, or salinity-based water quality issues. A study that does not fully address the issue of water quality cannot effectively evaluate the economics of water management alternatives.

3) **Study Conclusions:**

The study makes few firm conclusions. However, it is important for CUWA to express the conclusions that it sees coming out of the analysis.

- Based on the economic analysis of water supply and quality, all potential solutions to the Bay-Delta should be preserved.

- The best economic outcomes identified in this report involve a Delta conveyance facility and additional storage.

- Many of the resources used to create the best economic outcome are speculative, based on thin data, and in need of additional study. This is particularly true of the

resources identified as being in the $800 to $1000 per AF category.

- A multi-hydrology modeling approach including explicit water quality standards is needed to more fully understand the economics of reliability and water quality in the Delta.

- While it is understandable that this screening analysis could not adequately address issues related to local storage, this shortcoming should be addressed in the upcoming multi-year studies. By its nature, the screening analysis is unable to reflect the full impact of multi-year droughts on water agencies' ability to deliver water to end-users. However, the added negative effect of depleted local storage is an important issue for urban reliability, and needs to be addressed appropriately in the ongoing multi-year analysis. The interplay between resource options, if appropriately modeled, could change our interpretation of the relative benefits of each resource.

  Another important issue that could not be addressed in the screening analysis relates to the Delta pumping restrictions related to take limitations. We have growing experience with operating under these restrictions, and should develop some way to include these effects in the larger multi-year analysis. These restrictions could have a strong impact on the desirability of particular resource options — for example, surface or groundwater storage north or south of the Delta could have very different benefits depending on restriction on pumping operations. A storage program which depended on capturing May runoff could be of limited practicality if pumps are expected to be shut down during that month to protect fish. Similarly, appropriate attention to this restriction could identify even greater benefits associated with the Isolated Facility.

As described above, we are encouraged by the initial results of the EEWMA. The EEWMA provides a good framework for consideration of all identified water management alternatives on an equal basis. However, we believe that additional analysis is required to improve on the strong foundation laid by CALFED's EEWMA. We are very interested in working with and supporting CALFED to successfully complete these activities. If you have any questions, please me at (916) 552-2929.

Sincerely,

Executive Director